

Fig. I.1A

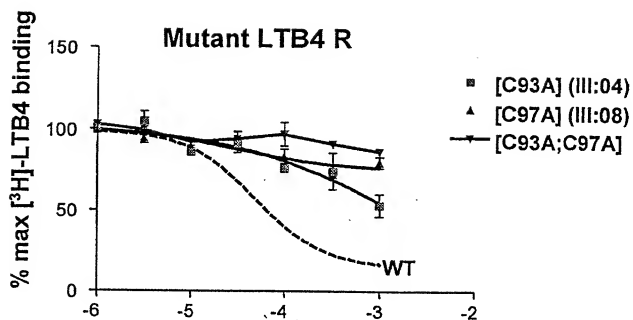


Fig. I.1B

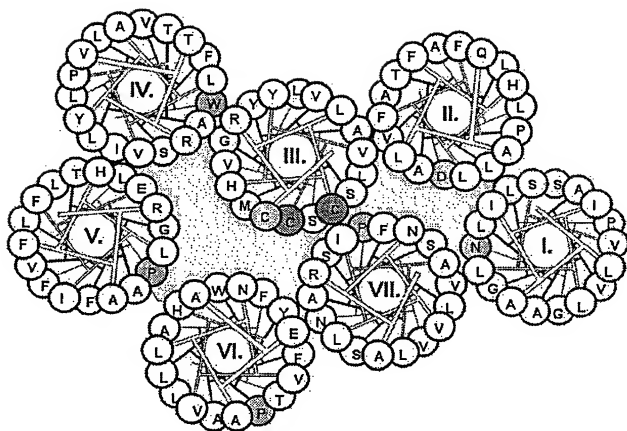


Fig. I.1C

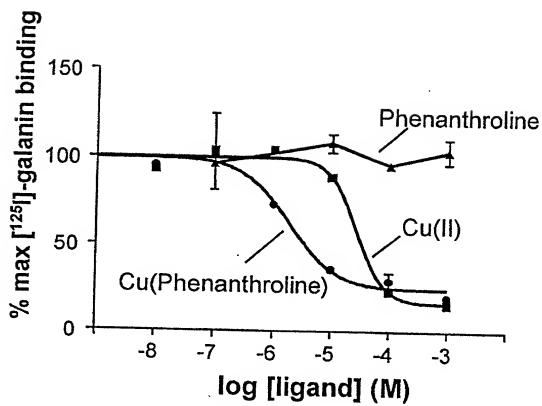


Fig. I.2A

5/29

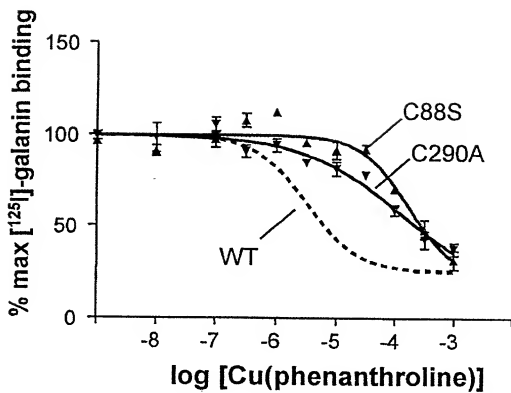


Fig. I.2B

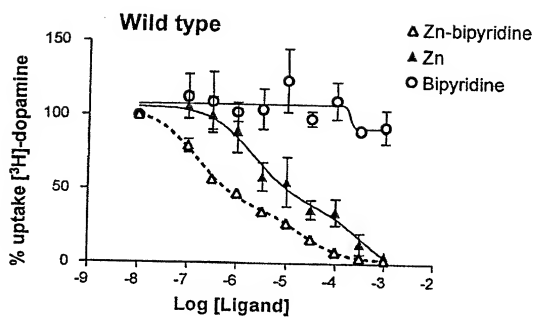


Fig. I.3A

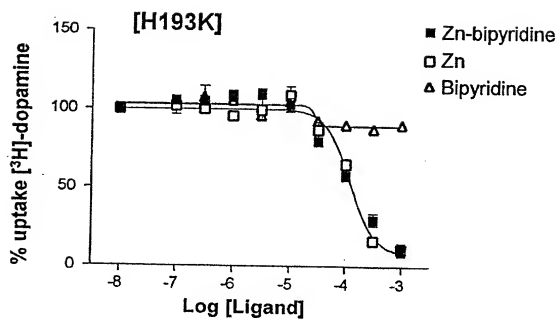


Fig. I.3B

8/29

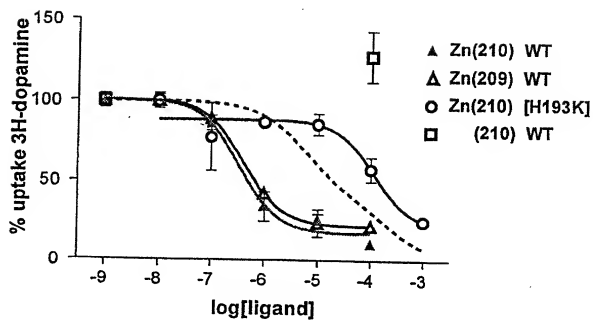


Fig. I.3C

		Ions		1,10-Phenanthroline-complexes		2,2'-Bipyridine-complexes	
		Zn $\pm$ SEM (n)	Cu $\pm$ SEM (n)	Zn $\pm$ SEM (n)	Cu $\pm$ SEM (n)	Zn $\pm$ SEM (n)	Cu $\pm$ SEM (n)
WT hNK 1		320 $\pm$ 20 (5)	370 $\pm$ 30 (5)	490 $\pm$ 50 (4)	480 $\pm$ 60 (3)	390 $\pm$ 60 (4)	150 $\pm$ 30 (2)
Y92H	Il:24;IlI:04	17 $\pm$ 3 (3)	28 $\pm$ 5 (2)	26 $\pm$ 5 (2)	28 $\pm$ 6 (3)	31 $\pm$ 5 (3)	25 $\pm$ 3 (2)
E193H;N109H	IlI:05;V:01	13 $\pm$ 5 (2)	120 $\pm$ 20 (2)	46 $\pm$ 9 (2)	120 $\pm$ 20 (2)	13 $\pm$ 4 (2)	160 $\pm$ 30 (2)
P112H;M291C	IlI:08;VIlI:06	41 $\pm$ 9 (6)	82 $\pm$ 15 (2)	63 $\pm$ 4 (5)	45 $\pm$ 12 (4)	21 $\pm$ 2 (4)	13 $\pm$ 2 (4)
Y272H	V:05;VIl:24	9.1 $\pm$ 1 (3)	330 $\pm$ 50 (3)	6.8 $\pm$ 1.2 (3)	150 $\pm$ 20 (2)	9.8 $\pm$ 3.2 (2)	140 $\pm$ 20 (2)

Fig. II.1A

10/29

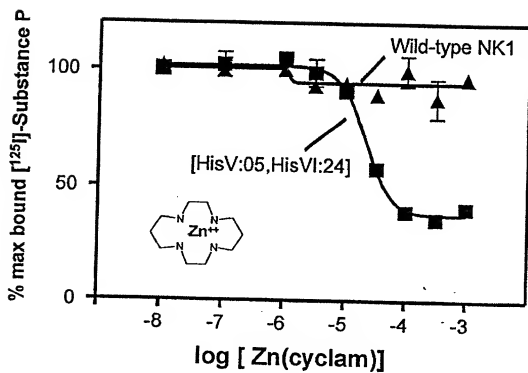


Fig. II.1B



**Fig. II.1C**

12/29

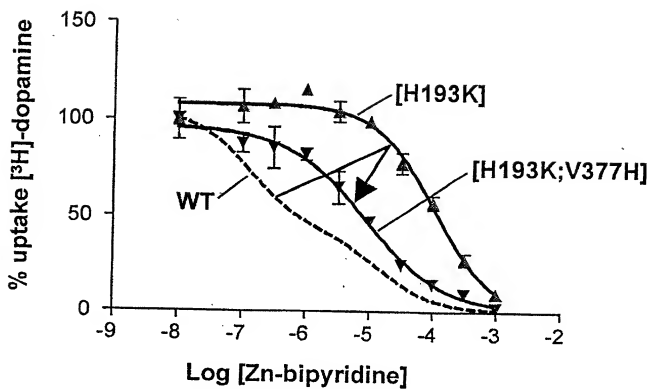


Fig. II.2A

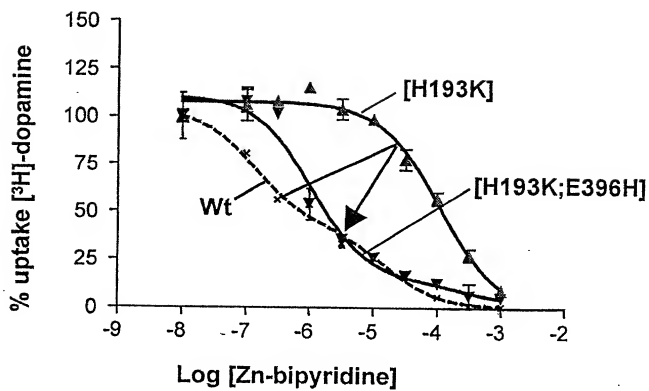


Fig. II.2B

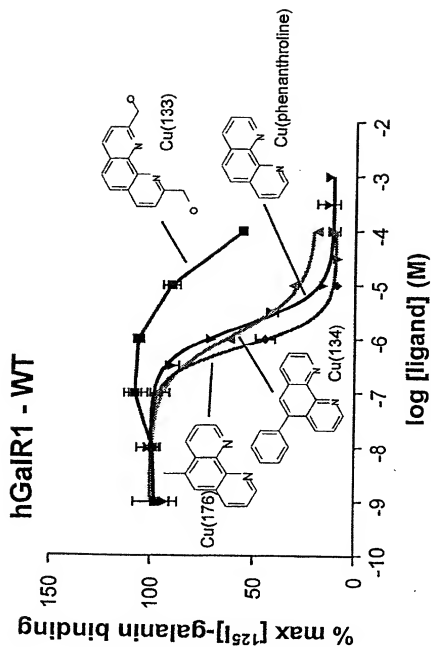


Fig. III.1A

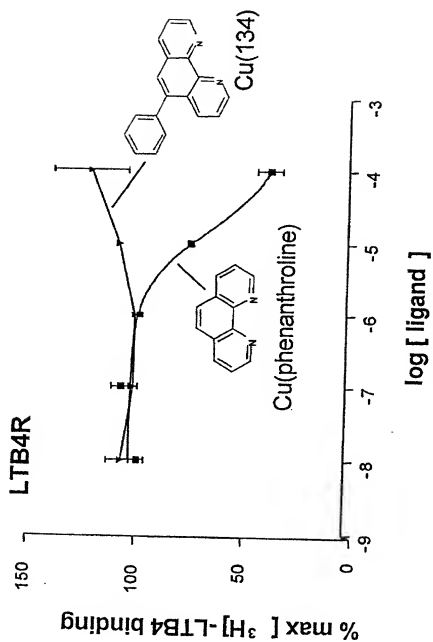


Fig. III.1B

[HisV:05;HisVI:24]-NK1

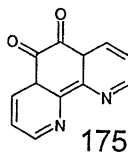
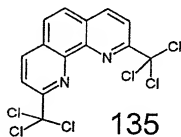
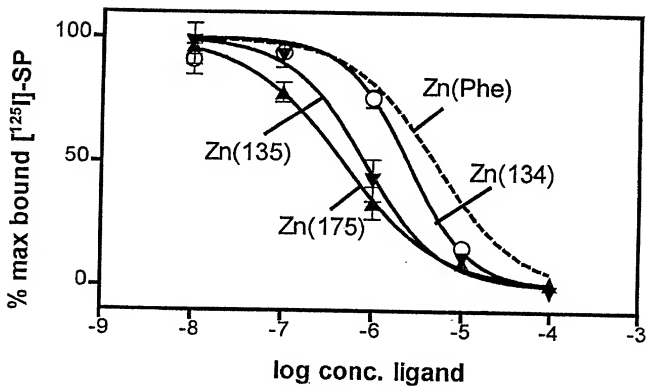


Fig. III.2A

[HisIII:08;CysVII:06]-NK1

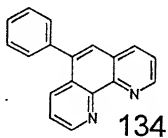
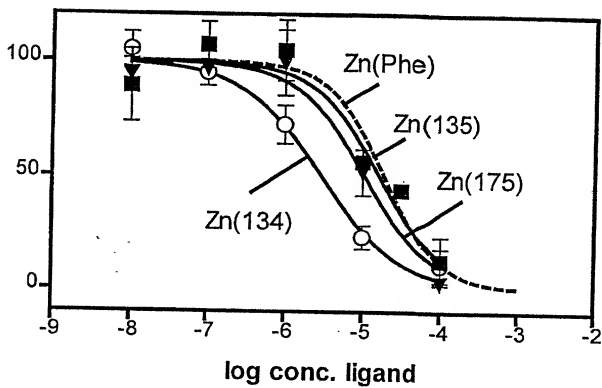


Fig. III.2B

18/29

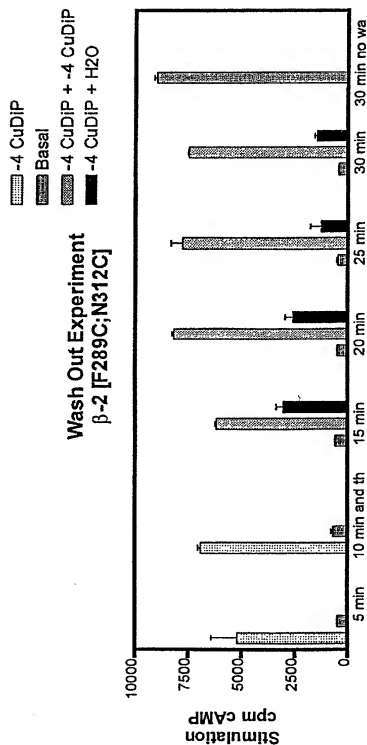


Fig. III.3A

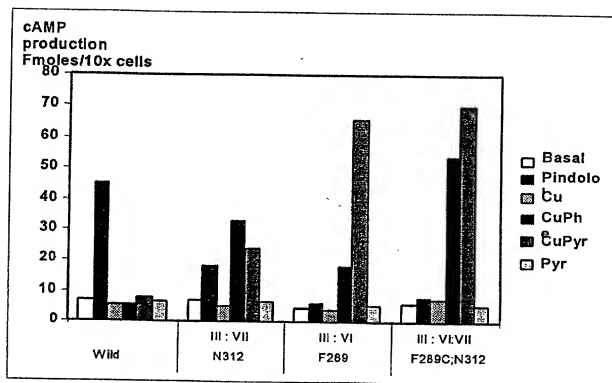


Fig. III.3B

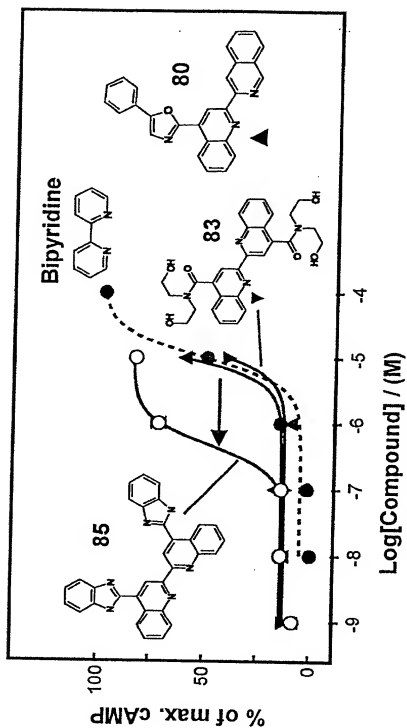


Fig. III.3C

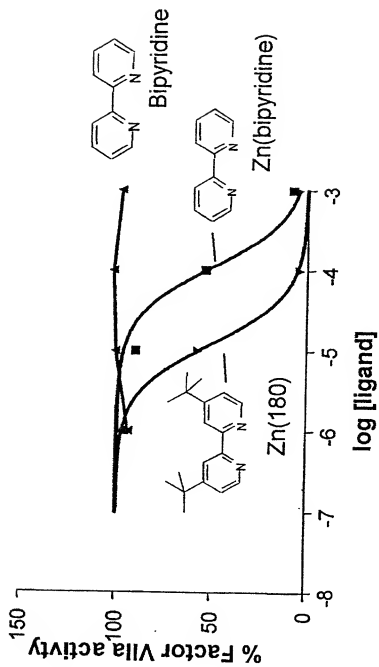


Fig. III.4A

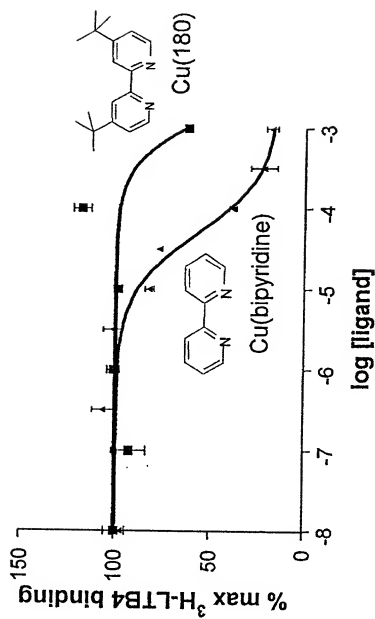


Fig. III.4B

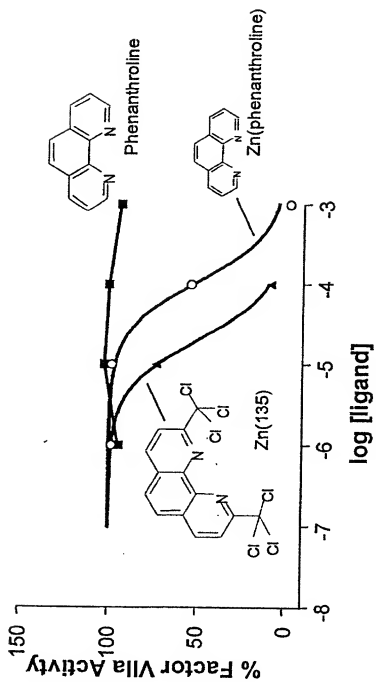


Fig. III.4C

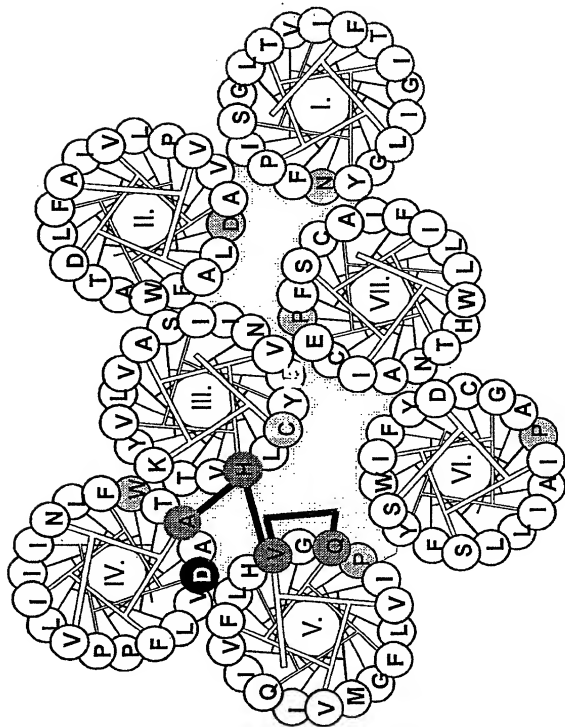


Fig. III.5

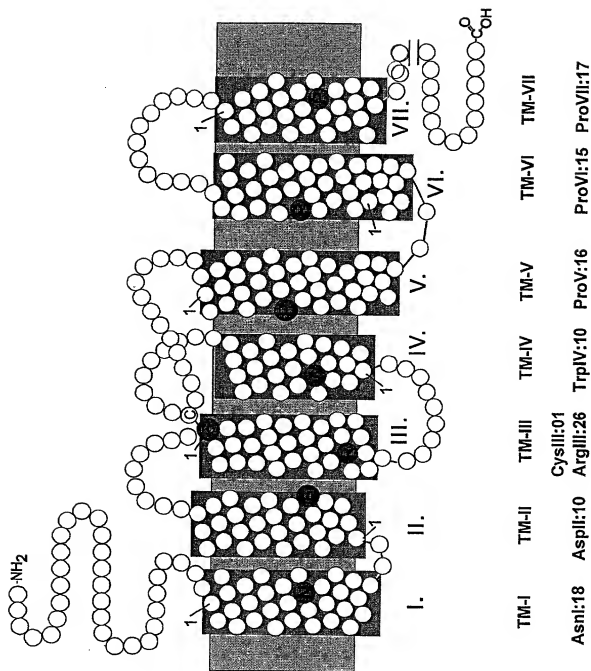
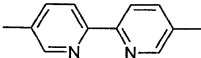
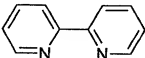
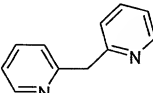
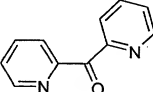
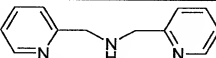
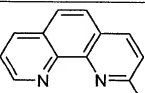
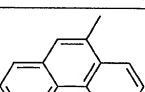
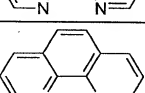
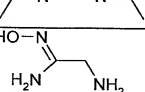


Fig. IV

	Metal ion	Log K <sub>1</sub>	Log K <sub>2</sub>	Log K <sub>3</sub>
	Co <sup>2+</sup>	6.4	11.3	16.6
	Co <sup>2+</sup>	5.8	11.3	16.0
	Ni <sup>2+</sup>	7.0	13.9	16.6
	Zn <sup>2+</sup>	5.3	9.6	13.3
	Cu <sup>2+</sup>	8.1	13.6	17.0
	Zn <sup>2+</sup>	2.8	5.2	
	Cu <sup>2+</sup>	5.1		
	Zn <sup>2+</sup>	7.6	12.1	
	Zn <sup>2+</sup>	5.0	9.4	12.7
	Cu <sup>2+</sup>	7.4	13.8	
	Zn <sup>2+</sup>	6.6	12.6	18.3
	Cu <sup>2+</sup>	8.6	15.0	20.0
	Zn <sup>2+</sup>	4.1	7.7	
	Cu <sup>2+</sup>	5.2	11.0	19.1
	Zn <sup>2+</sup>	4.1	7.8	9.5

Figur V

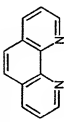
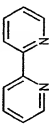
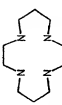


Compound	Structure	Name	Provider
62		1,10-Phenanthroline	Sigma
92		Dipyrindine	Sigma
60		Cyclam	Aldrich
80		2-((isoquinoline-3-yl)-(4-(5-phenyl-oxazol-2-yl))-quinoline	ChemDiv Inc.
83		2,2'-di(4-(N,N'-(2-hydroxyethyl)carboxamide)quinoline)	ChemDiv Inc.

Fig. VI

85		2,2'-di(4-(benzimidazol-2-yl)-quinoline)	ChemDiv Inc.
133		2,8-dimethanol-1,10-phenanthroline	Sigma-Aldrich
134		5-phenyl-1,10-phenanthroline	Sigma-Aldrich
135		2,8-bis(trichloromethyl)-1,10-phenanthroline	Sigma-Aldrich
175		1,10-phenanthroline-5,6-dione	Aldrich

Fig. VI


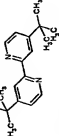


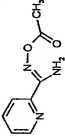
176		5-methyl-1,10-phenanthroline	Sigma
180		4,4'-DI-tert-butyl-2,2'-dipyridyl	Aldrich
183		Dipyrro[3,2-a:2',3'-c]phenazine hemihydrate	ABCR GmbH & Co
209		2-pyridylamidoxime	7TM Pharma
210		2-pyridylamidoxime, O-acetyl	7TM Pharma

Fig. VI